Windows®. Life without Walls™.
Fujitsu recommends Windows 7.

Data Sheet
Fujitsu CELSIUS M470 Workstation

Your new "thoroughbred" workstation

The CELSIUS M Series is the single-processor platform with a particularly well-balanced ratio between price and performance. The CELSIUS M470 incorporates the latest advances in performance technologies enabling you to meet increasingly demanding schedules using professional applications such as CAD/CAE, virtual reality and finance.

Performance
Higher productivity
- High performance multi-core processors, hard disk drives and next generation graphics subsystems

Ergonomics
Quiet system for a pleasant working environment
- Optimized thermal management, low-noise chassis and silent fans

Reliability
System stability for the complete lifecycle
- High product standards thanks to top-quality components and comprehensive testing in certified in-house laboratories for 24/7 operation

Certification of workstation applications
Stability, compatibility and performance for the main workstation applications
- Comprehensive support for ISV applications and ease of integration into existing IT networks

Expandability
Excellent expandability for future demands
- Increased memory capacities of up to 24 GB

Green IT · 6 CORE PERFORMANCE · PROFESSIONAL GRAPHICS · ISV CERTIFICATION · MULTI DISPLAY SUPPORT · INFORMATION DISPLAY · QUIET RUNNING · RACK MOUNTABLE · 24/7 OPERATION · DYNAMIC USB SECURITY

Windows®. Life without Walls™.
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Components

Processor	Intel® Xeon® processor X5690 (6 Cores / 12 Threads, 3.46 GHz, 12 MB)
	Intel® Xeon® processor X5687 (4 Cores / 8 Threads, 3.60 GHz, 12 MB)
	Intel® Xeon® processor X5680 (6C, 3.33 GHz, 12 MB, 6.4 GT/s)
	Intel® Xeon® processor X5677 (4C, 3.46 GHz, 12 MB, 6.4 GT/s)
	Intel® Xeon® processor X5675 (6 Cores / 12 Threads, 3.06 GHz, 12 MB)
	Intel® Xeon® processor X5672 (4 Cores / 8 Threads, 3.20 GHz, 12 MB)
	Intel® Xeon® processor X5670 (6C, 2.93 GHz, 12 MB, 6.4 GT/s)
	Intel® Xeon® processor X5667 (4C, 3.06 GHz, 12 MB, 6.4 GT/s)
	Intel® Xeon® processor X5660 (6C, 2.80 GHz, 12 MB, 6.4 GT/s)
	Intel® Xeon® processor X5650 (6C, 2.66 GHz, 12 MB, 6.4 GT/s)
	Intel® Xeon® processor W3690 (6 Cores / 12 Threads, 3.46 GHz, 12 MB)
	Intel® Xeon® processor W3565 (4C, 3.20 GHz, 8 MB, 4.8 GT/s)
	Intel® Xeon® processor W3550 (4C, 3.06 GHz, 8 MB, 4.8 GT/s)
	Intel® Xeon® processor W3530 (4C, 2.80 GHz, 8 MB, 4.8 GT/s)
	Intel® Xeon® processor W3520 (4C, 2.66 GHz, 8 MB, 4.8 GT/s)
	Intel® Xeon® processor W3505 (2C, 2.53 GHz, 4 MB, 4.8 GT/s)
	Intel® Xeon® processor W3503 (2C, 2.5 GHz, 4 MB, 4.8 GT/s)
	Intel® Xeon® processor L5640 (6C, 2.26 GHz, 12 MB, 5.86 GT/s)
	Intel® Xeon® processor L5630 (4C, 2.13 GHz, 12 MB, 5.86 GT/s)
	Intel® Xeon® processor L5609 (4C, 1.86 GHz, 12 MB, 5.86 GT/s)
	Intel® Xeon® processor E5649 (6 Cores / 12 Threads, 2.53 GHz, 12 MB)
	Intel® Xeon® processor E5647 (4 Cores / 8 Threads, 2.93 GHz, 12 MB)
	Intel® Xeon® processor E5645 (6 Cores / 12 Threads, 2.40 GHz, 12 MB)
	Intel® Xeon® processor E5640 (4C, 2.66 GHz, 12 MB, 5.86 GT/s)
	Intel® Xeon® processor E5630 (4C, 2.53 GHz, 12 MB, 5.86 GT/s)
	Intel® Xeon® processor E5620 (4C, 2.40 GHz, 12 MB, 5.86 GT/s)
	Intel® Xeon® processor E5607 (4 Cores / 4 Threads, 2.26 GHz, 8 MB)
	Intel® Xeon® processor E5606 (4 Cores / 4 Threads, 2.13 GHz, 8 MB)
	Intel® Xeon® processor E5603 (4 Cores / 4 Threads, 1.60 GHz, 8 MB)
	Intel® Xeon® processor W3670 (6 Cores / 12 Threads, 3.20 GHz, 12 MB)
Operating system	
Operating system	Genuine Windows® 7 Professional 64-bit
	Genuine Windows® 7 Professional 32-bit
Operating system compatible	Genuine Windows® XP Professional x64 Edition
	Genuine Windows® XP Professional
	Linux
Operating system notes	Red Hat® certification
	Novell® certification
	For some configurations third party drivers are currently not available or configuration restrictions may apply.
Memory modules	1 GB (1 module(s) 1 GB) DDR3, 1333 MHz, PC3-10600
	1 GB (1 module(s) 1 GB) DDR3, ECC, 1333 MHz, PC3-10600
	2 GB (1 module(s) 2 GB) DDR3, ECC, 1333 MHz, PC3-10600
	4 GB (1 module(s) 4 GB) DDR3, ECC, 1333 MHz, PC3-10600

Graphics add on cards (optional)	Midrange 3D: ATI FirePro™ V5900, 2 GB, 800 stream processors, PCIe x16, DL-DVI-I, 2x DP
	High-end 3D: ATI FirePro™ V7900, 2 GB, 1140 stream processors, PCIe x16, 4 x DP
	Midrange 3D: NVIDIA® Quadro® 2000D, 1 GB, 192 cores, PCIe x16, 2x DL-DVI-I
	Ultra-high-end 3D: NVIDIA® Quadro® 5000, 2.5 GB, 352 cores, PCIe x16, DL-DVI-I, 2x DP, DVI, VGA
	Ultra-high-end 3D: NVIDIA® Quadro® FX 4800, 1.5 GB, 192 cores, PCIe x16, 2x DL-DVI-I, 2x DP
	High-end 3D: ATI FirePro™ V7800, 2 GB, 1140 stream processors, PCIe x16, DL-DVI-I, 2x DP
	High-end 3D: NVIDIA® Quadro® 4000, 2 GB, 256 cores, PCIe x16, DL-DVI-I, 2x DP
	High-end 3D: NVIDIA® Quadro® FX 3800, 1 GB, 192 cores, PCIe x16, DL-DVI-I, 2x DP
	Midrange 3D: ATI FirePro™ V5800, 1 GB, 800 stream processors, PCIe x16, DL-DVI-I, 2x DP
	Midrange 3D: NVIDIA® Quadro® 2000, 1 GB, 192 cores, PCIe x16, DL-DVI-I, 2x DP
	Midrange 3D: NVIDIA® Quadro® FX 1800, 768 MB, 64 cores, PCIe x16, DL-DVI-I, 2x DP
	Entry 3D: ATI FirePro™ V4800, 1 GB, 400 stream processors, PCIe x16, DL-DVI-I, 2x DP
	Entry 3D: NVIDIA® Quadro® 600, 1 GB, 96 cores, PCIe x16, DL-DVI-I, DP
	Entry 3D: NVIDIA® Quadro® 400 , 512 MB, 48 cores, PCIe x16, 1x DVI-I, DP
	Entry 3D: NVIDIA® Quadro® FX 580, 512 MB, 32 cores, PCIe x16, DL-DVI-I, 2x DP
	Entry 3D: ATI FirePro™ V3800, 512 MB, 400 stream processors, PCIe x16, DL-DVI-I, DP
	Entry 3D: NVIDIA® Quadro® FX 380, 256 MB, 16 cores, PCIe x16, 2x DL-DVI-I
	Professional 2D: NVIDIA® Quadro® NVS 450, 512 MB, 2 x 8 cores, PCIe x16, 4 x DP
	Professional 2D: NVIDIA® Quadro® NVS 300, 512 MB, 16 cores, PCIe Gen2 x16, 2x DVI/VGA
	Professional 2D: NVIDIA® Quadro® NVS 295, 256 MB, 8 Cores, PCIe x16, 2x DP
	Professional 2D: NVIDIA® Quadro® NVS 290, 256 MB, 16 cores, PCIe x16, 2x SL DVI-I
	Multi monitor 2D: NVIDIA® Quadro® NVS 295, 256 MB, 8 Cores, PCIe x1, 2x DP
	Remote Graphics: CELSIUS RemoteAccess Card, PCIe x1, 2x DVI-I
Hard disk drives (internal)	SSD SATA, 256 GB, 2.5-inch
	SSD SATA, 128 GB, 2.5-inch
	SATA III, 10000 rpm, 600 GB, 3.5-inch internal
	SATA III, 10000 rpm, 300 GB, 2.5-inch
	SATA III, 7200 rpm, 1000 GB, 3.5-inch, business critical
	SATA III, 7200 rpm, 500 GB, 3.5-inch, business critical
	SATA II, 10000 rpm, 150 GB, 2.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 2000 GB, 3.5-inch, business critical
	SATA II, 7200 rpm, 1000 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 500 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 320 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 160 GB, 3.5-inch, S.M.A.R.T.
	HDD SAS, 15000 rpm, 600 GB, 3.5-inch internal
	HDD SAS, 15000 rpm, 450 GB, 3.5-inch
	HDD SAS, 15000 rpm, 300 GB, 3.5-inch
Hard disk notes	2.5-inch drives will be mounted in the 3.5-inch bays One Gigabyte equals one billion bytes, when referring to hard disk drive capacity.
Drives (optional)	Blu-ray Disc™ Triple Writer
	DVD-ROM
	DVD Super Multi
	MultiCard Reader 20in1, 5.25-Inch
	MultiCard Reader 20in1 USB 2.0 5.25-Inch

Interface add on cards/components (optional)	
	WLAN III, 802.11g/Draft-n (Windows only)
	USB 3.0 PCIe x1
	Parallel Interface
	Gigabit Ethernet PCIe x1
	eSATA Interface
	Dual serial card PCI
	Dual 1 Gigabit Ethernet PCIe x4
	Dual 10 Gigabit Ethernet PCIe x8

Base unit	CELSIUS M470-2	CELSIUS M470-2 POWER
Mainboard		
Mainboard type	D2778	
Formfactor	ATX	
Chipset	Intel® X58 Express, Intel® 82801JR ICH10R	
Processor socket	LGA 1366	
Processor quantity maximum	1	
Memory slots	6 DIMM	
Supported capacity RAM (max.)	48 GB	
Memory notes	In configurations with 4 GB and more the visible memory may be reduced to approximately 3.5 GB or less (for 32-bit operating systems) and configurations with 8 GB the visible memory may be reduced to approximately 7.5 GB or less (depending on system configuration).	
LAN	Built-in 10/100/1000 MBit/s Realtek RTL8111	
Audio codec	Realtek ALC663	
Audio features	High Definition Audio	
I/O controller on board		
Serial ATA total	6	
SATA RAID support	0, 1, 10, 5	
Interfaces		
Audio: in (rear)	1	
Audio: out / SPDIF (rear)	2 / 1	
Audio: in	1	
Audio: out	1	
FireWire (IEEE1394) (front)	1	
FireWire (IEEE1394) (rear)	1	
Internal speakers	1	
USB 2.0 total	11	
USB front	2	
USB rear	6	
USB internal	3, thereof 1 type A	
Serial (RS-232)	1	
Mouse / Keyboard (PS/2)	1 / 1	
Ethernet (RJ-45)	1	
Interface Module notes	Anytime USB charge functionality	
Drive bays		
Drive bays total	7	
3.5-inch internal bays	4	
5.25-inch external bays	3	
Slots		
PCI-Express 2.0 x16	2 x (312 mm) full height	
PCI-Express 1.0 x4 (mech. x8)	1 x (312 mm) full height	

Slots		
PCI-Express 2.0 x4 (mech. x8)	1 x (312 mm) full height	
PCI (32-bit / 33 MHz)	2 x (312 mm) full height	
Electrical values		
Power consumption note	190 W depending on configuration	190 W depending on configuration
Rated voltage range	100 V - 240 V	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz	50 Hz - 60 Hz
Max. output of single power supply	500 W up to 85% efficiency	700 W up to 85% efficiency
Noise for standard configuration (HDD, ODD, FDD)		
Noise emission	According to ISO9296 (LpAm at bystander position)	According to ISO9296 (LpAm at bystander position)
Idle mode	23 dB(A)	23 dB(A)
Office mode	23 dB(A)	23 dB(A)
Noise notes / description	depending on configuration	depending on configuration
Dimensions / Weight / Environmental		
Dimensions (W x D x H)	215 x 522 x 446 mm	
Operating position	Vertical / horizontal	
Weight	18 kg	
Weight notes	Actual weight may vary depending on configuration	
Operating ambient temperature	15 - 35C	
Operating relative humidity	10 - 75 %	
Compliance		
Product	CELSIUS M470-2	CELSIUS M470-2 POWER
Model	MCS-D2778	
Germany	GS depending on configuration Blauer Engel / Blue Angel	GS depending on configuration
Europe	CE	
USA/Canada	cCSAus FCC Class B	
Global	RoHS (EU & China) ENERGY STAR® 5.0 Medical EMC standard IEC60601-1-2 in combination with medical kit	
China	CCC	
Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx	
Security		
System protection	Kensington Lock support Eye for padlock Seal option Intrusion switch Optional: Integrated cabinet lock	
Audit proof protection	Write protect option for the Flash EPROM Boot protection for floppy disk / CD drive and write protection for floppy disk drive Dynamic USB security for full hardware USB protection Control of all USB interfaces External USB interfaces detachable separately Embedded security (TPM 1.2) - Infineon	
Access protection	Optional: Access protection via internal SmartCard reader User and supervisor BIOS password Optional: SmartCase Logon+	

Additional Software		
Additional software (optional)	Drivers & Utilities DVD (DUDVD) Windows® 7 & Vista & XP CyberLink PowerDVD 9 Nero 9 Essentials XL Recovery DVD (Windows® 7) Windows® XP 64 downgrade pack Windows® XP 32 downgrade pack	
	Keyboard on (Special Fujitsu keyboard required) Thermal management	Keyboard on (Special Fujitsu keyboard required) Thermal management
Spare part availability	5 years	5 years
Manageability		
Manageability technology	DeskUpdate Driver management	
Manageability software	DeskView 10.x client management including: DASH 1.1 remote system management	
DeskView components	On/Offline remote client management Detailed system inventory management and reports BIOS Management Remote power management System notifications Security Remote Control DeskView Helpdesk Integration	
Supported standards	WMI BootP (made4you) PXE WoL (Wake on LAN)	
Manageability link	http://ts.fujitsu.com/manageability	
Input device / components		
	Optical USB tilt wheel mouse	
Input devices (optional)	Optical USB/PS2 tilt wheel mouse Space Explorer USB Space Navigator USB Space Pilot USB Keyboard	
Warranty		
Standard Warranty	3 years (depending on country)	
Service level	On-site Service (depending on country)	
Maintenance and Support Services - the perfect extension		
Recommended Service	5x9, Response Time: Next Business Day	
Service Weblink	http://ts.fujitsu.com/Supportservice	

More information

Fujitsu platform solutions

In addition to Fujitsu CELSIUS M470, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures
With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing Products
www.fujitsu.com/global/services/computing/

Software
www.fujitsu.com/software/

More information

Learn more about Fujitsu CELSIUS M470, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
http://ts.fujitsu.com/celsius

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.
Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT.
Please find further information at http://www.fujitsu.com/global/about/environment/

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